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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,019	11/29/2000	John E. Thompson	10799/12	8962

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EXAMINER

IBRAHIM, MEDINA AHMED

ART UNIT PAPER NUMBER

1638

DATE MAILED: 03/22/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/725,019	THOMPSON ET AL.	
	Examiner	Art Unit	
	Medina Ibrahim	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-70 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-2, 21, 43-44, and 47, drawn to an isolated DNA molecule encoding senescence-induced deoxyhypusine synthase, a vector, transgenic plant cell comprising it, and a method for inhibiting senescence by sense expression of said DNA, classified in class 800, subclass 290, for example.
 - II. Claims 3-4, drawn to isolated senescence-induced DHS, classified in class 530, subclass 350, for example.
 - III. Claims 5-6, 22, and 47, drawn to an isolated DNA molecule encoding senescence-induced eIF-5A, in sense, in a vector, transgenic plant cell comprising it, classified in class 800, subclass 278, for example.
 - IV. Claims 7-11, 14-20, ^{remove 43-44} ~~24-46~~, 48-54, 56-57, 59-65, and 67-70, drawn to a vector comprising antisense oligonucleotides of senescence-induced DHS gene, transgenic plant/progeny, a method for inhibiting the expression of endogenous DHS, or altering age related senescence in a plant, or increasing resistance to diseases by expressing said sequences, a plant/progeny with inhibited expression of DHS, classified in class 800, subclass 286, for example.
 - V. Claims 12-17, 24-42, 45-46, 48-53, 55-56, 58, 66-70, drawn to a vector comprising antisense oligonucleotides of senescence-induced eIF-5A gene,

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transgenic plant/progeny, a method for inhibiting or altering age-related senescence by expressing said nucleotide, classified in class 435, subclass 320.1, for example.

VI. Claims 23 and 47, drawn to a vector comprising both DHS and eIF-5A DNAs in sense orientation, and transgenic plant cell expressing both DHS and eIF-5A, classified in class 435, subclass 468, for example.

VII. Claims 28-42, 45, 56, and 67-70, drawn to a method for inhibiting the expression of endogenous DHS and eIF-5A, or altering age related senescence in a plant, or increasing resistance to diseases by antisense expression of oligonucleotides of DHS and eIF-5A in a vector, a plant/progeny with inhibited expression of both DHS and eIF-5A, classified in class 800, subclass 298, for example.

For the inventions of Groups I-VII, restriction to one of the following inventions is also required under 35 USC 121. For the inventions of Groups I, II and IV, election of one of the inventions (A)-(C) is required; for the inventions of Group III and V, election of one of the inventions (D)-(F) is required; for the invention of Groups VI and VII, election of one sequence from (A)-(C) and one sequence from (D)-(E) is required.

(A). SEQ ID No: 1 or a sequence encoding SEQ ID NO:2

(B). SEQ ID No: 5

(C). SEQ ID No: 9 or a sequence encoding SEQ ID NO:10

(D). SEQ ID No: 11

(E). SEQ ID No: 13

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(F). SEQ ID No: 15

2. The inventions are distinct, each from the other because of the following reasons:

Inventions (A)-(F) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions, represent structurally different polynucleotides and structurally different proteins. Therefore, where structural identity is required, such as for hybridization or expression, the different sequences have different effects.

Inventions I or IV and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the isolated polypeptide of of Group II can be made by an alternative process, such as chemical synthesis.

Inventions I and III or IV and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are directed to divergent molecules having different functions and effects.

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3. Inventions VI and VII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the DNA molecules of Group VI can be used in hybridization assays.

Inventions VI and VII are patentably distinct from each of the other groups because they require co-expression of both senescence-induced DHS and eIF-5A, which is not required by any of the other groups. related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the DNA molecules of Group VI can be used in hybridization assays.

4. Because these inventions are distinct for the reasons given above, have acquired a separate status in the art as shown by their different classification, and the literature and sequence searches required for each of the Groups are not required for another of the Groups, restriction for examination purposes as indicated is proper.

5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

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6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

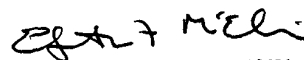
7. Papers relating to this application may be submitted to Technology Sector 1 by facsimile transmission. Papers should be faxed to Crystal Mall 1, Art Unit 1638, using fax number (703) 308-4242. All Technology Sector 1 fax machines are available to receive transmissions 24 hrs/day, 7 days/wk. Please note that the faxing of such papers must conform with the Notice published in the Official Gazette, 1096 OG 30, (November 15, 1989).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (703) 306-5822. The Examiner can normally be reached Monday, Tuesday, and Thursday from 8:30 AM - 6:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0196.

March 19, 2002
mai


ELIZABETH F. McELWAIN
PRIMARY EXAMINER
GROUP 1600